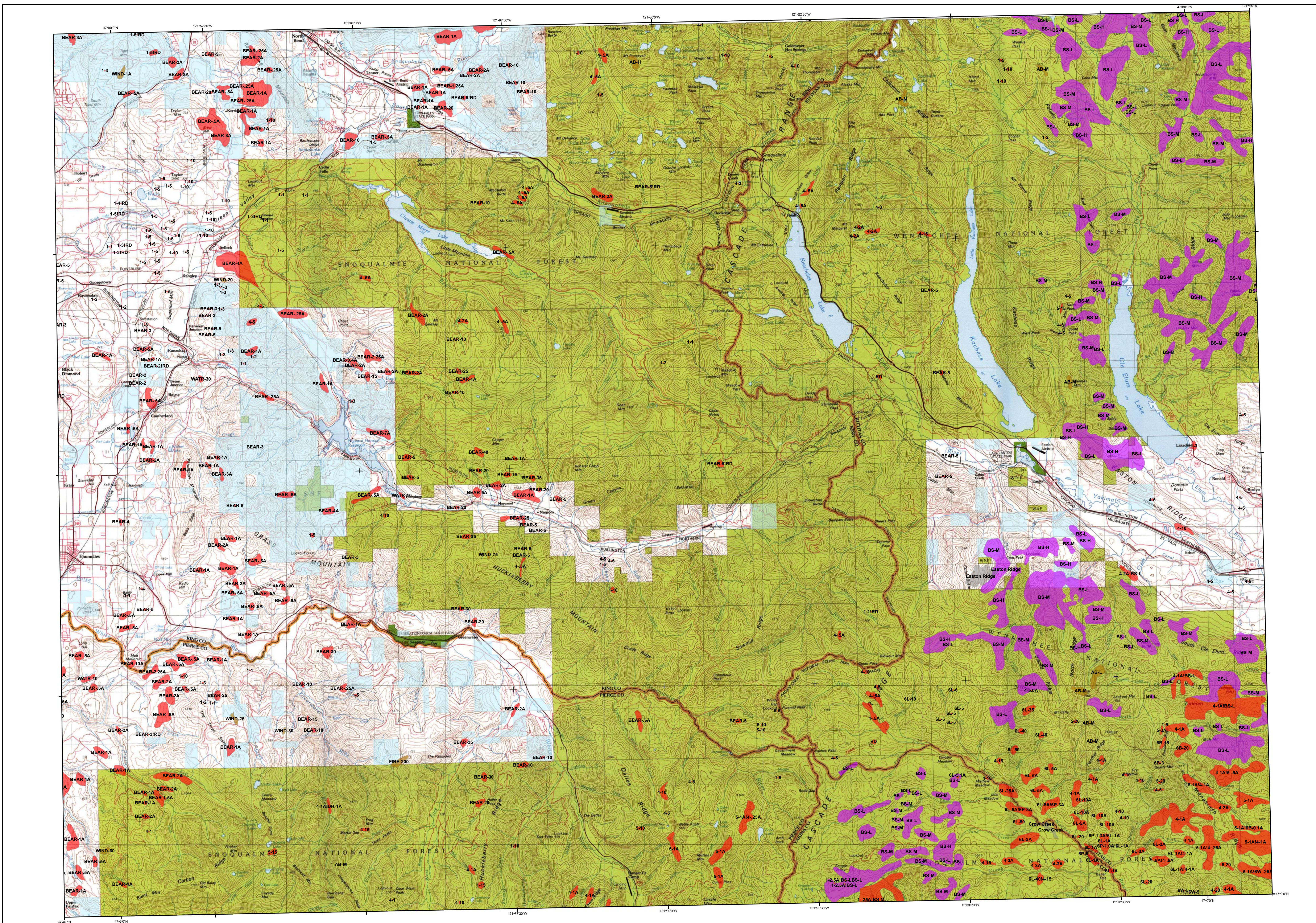


**2007 Aerial Insect and Disease Survey**  
**USGS 100K Quad: Snoqualmie Pass - A147121; 4D**



Mortality Agents				
Defoliators		Dead	Living	
Cause		Damaging Agent	Primary Host	
Cause		Damaging Agent	Primary Host	
AA	Spine spruce	1	Douglas fir beetle	Douglas-fir
AB	Western blackheaded budworm	2	Douglas fir sawyer	Spruce
BB	Western spruce budworm	3	Mountain pine beetle	Spruce
BA	Modic budworm	4	Western hemlock bark beetle	Sub-epine
BC	Western spruce budworm	5	Mountain pine beetle	White-pine
CB	Spine is highly capophemid	6	Mountain pine beetle	Kodokone pine
CH	Western hemlock looper	6K	Mountain pine beetle	Ponderosa pine
CI	Green spruce forest looper	6K	Mountain pine beetle	Ponderosa pine
CL	Black pine beetle	6K	Mountain pine beetle	Ponderosa pine
LL	Black pine beetle	6W	Mountain pine beetle	Western white pine
ML	Black pine beetle	6W	Mountain pine beetle	Ponderosa pine
NA	Needle miner	7	Needle miner	Ponderosa pine
NB	Needle miner	7	Needle miner	Ponderosa pine
NC	Needle miner	7	Needle miner	Ponderosa pine
ND	Needle miner	7	Needle miner	Ponderosa pine
NE	Needle miner	7	Needle miner	Ponderosa pine
NF	Needle miner	7	Needle miner	Ponderosa pine
NW	Needle miner	7	Needle miner	Ponderosa pine
OB	Needle miner	7	Needle miner	Ponderosa pine
OC	Needle miner	7	Needle miner	Ponderosa pine
OD	Needle miner	7	Needle miner	Ponderosa pine
OE	Needle miner	7	Needle miner	Ponderosa pine
OF	Needle miner	7	Needle miner	Ponderosa pine
OG	Needle miner	7	Needle miner	Ponderosa pine
OH	Needle miner	7	Needle miner	Ponderosa pine
OI	Needle miner	7	Needle miner	Ponderosa pine
OJ	Needle miner	7	Needle miner	Ponderosa pine
OK	Needle miner	7	Needle miner	Ponderosa pine
OL	Needle miner	7	Needle miner	Ponderosa pine
OM	Needle miner	7	Needle miner	Ponderosa pine
ON	Needle miner	7	Needle miner	Ponderosa pine
OO	Needle miner	7	Needle miner	Ponderosa pine
OP	Needle miner	7	Needle miner	Ponderosa pine
OQ	Needle miner	7	Needle miner	Ponderosa pine
OR	Needle miner	7	Needle miner	Ponderosa pine
OS	Needle miner	7	Needle miner	Ponderosa pine
OT	Needle miner	7	Needle miner	Ponderosa pine
OU	Needle miner	7	Needle miner	Ponderosa pine
OV	Needle miner	7	Needle miner	Ponderosa pine
OW	Needle miner	7	Needle miner	Ponderosa pine
OX	Needle miner	7	Needle miner	Ponderosa pine
OY	Needle miner	7	Needle miner	Ponderosa pine
OZ	Needle miner	7	Needle miner	Ponderosa pine
QA	Needle miner	7	Needle miner	Ponderosa pine
QB	Needle miner	7	Needle miner	Ponderosa pine
QC	Needle miner	7	Needle miner	Ponderosa pine
QD	Needle miner	7	Needle miner	Ponderosa pine
QE	Needle miner	7	Needle miner	Ponderosa pine
QF	Needle miner	7	Needle miner	Ponderosa pine
QG	Needle miner	7	Needle miner	Ponderosa pine
QH	Needle miner	7	Needle miner	Ponderosa pine
QI	Needle miner	7	Needle miner	Ponderosa pine
QJ	Needle miner	7	Needle miner	Ponderosa pine
QK	Needle miner	7	Needle miner	Ponderosa pine
QL	Needle miner	7	Needle miner	Ponderosa pine
QM	Needle miner	7	Needle miner	Ponderosa pine
QN	Needle miner	7	Needle miner	Ponderosa pine
QO	Needle miner	7	Needle miner	Ponderosa pine
QP	Needle miner	7	Needle miner	Ponderosa pine
QQ	Needle miner	7	Needle miner	Ponderosa pine
QR	Needle miner	7	Needle miner	Ponderosa pine
QS	Needle miner	7	Needle miner	Ponderosa pine
QT	Needle miner	7	Needle miner	Ponderosa pine
QU	Needle miner	7	Needle miner	Ponderosa pine
QV	Needle miner	7	Needle miner	Ponderosa pine
QW	Needle miner	7	Needle miner	Ponderosa pine
QX	Needle miner	7	Needle miner	Ponderosa pine
QY	Needle miner	7	Needle miner	Ponderosa pine
QZ	Needle miner	7	Needle miner	Ponderosa pine
RA	Needle miner	7	Needle miner	Ponderosa pine
RB	Needle miner	7	Needle miner	Ponderosa pine
RC	Needle miner	7	Needle miner	Ponderosa pine
RD	Needle miner	7	Needle miner	Ponderosa pine
RE	Needle miner	7	Needle miner	Ponderosa pine
RF	Needle miner	7	Needle miner	Ponderosa pine
RG	Needle miner	7	Needle miner	Ponderosa pine
RH	Needle miner	7	Needle miner	Ponderosa pine
RI	Needle miner	7	Needle miner	Ponderosa pine
RJ	Needle miner	7	Needle miner	Ponderosa pine
RK	Needle miner	7	Needle miner	Ponderosa pine
RL	Needle miner	7	Needle miner	Ponderosa pine
RM	Needle miner	7	Needle miner	Ponderosa pine
RN	Needle miner	7	Needle miner	Ponderosa pine
RO	Needle miner	7	Needle miner	Ponderosa pine
RP	Needle miner	7	Needle miner	Ponderosa pine
RQ	Needle miner	7	Needle miner	Ponderosa pine
RR	Needle miner	7	Needle miner	Ponderosa pine
RS	Needle miner	7	Needle miner	Ponderosa pine
RT	Needle miner	7	Needle miner	Ponderosa pine
RU	Needle miner	7	Needle miner	Ponderosa pine
RV	Needle miner	7	Needle miner	Ponderosa pine
RW	Needle miner	7	Needle miner	Ponderosa pine
RX	Needle miner	7	Needle miner	Ponderosa pine
RY	Needle miner	7	Needle miner	Ponderosa pine
RZ	Needle miner	7	Needle miner	Ponderosa pine
SA	Needle miner	7	Needle miner	Ponderosa pine
SB	Needle miner	7	Needle miner	Ponderosa pine
SC	Needle miner	7	Needle miner	Ponderosa pine
SD	Needle miner	7	Needle miner	Ponderosa pine
SE	Needle miner	7	Needle miner	Ponderosa pine
SF	Needle miner	7	Needle miner	Ponderosa pine
SG	Needle miner	7	Needle miner	Ponderosa pine
SH	Needle miner	7	Needle miner	Ponderosa pine
SI	Needle miner	7	Needle miner	Ponderosa pine
SJ	Needle miner	7	Needle miner	Ponderosa pine
SK	Needle miner	7	Needle miner	Ponderosa pine
SL	Needle miner	7	Needle miner	Ponderosa pine
SM	Needle miner	7	Needle miner	Ponderosa pine
SN	Needle miner	7	Needle miner	Ponderosa pine
SO	Needle miner	7	Needle miner	Ponderosa pine
SP	Needle miner	7	Needle miner	Ponderosa pine
SQ	Needle miner	7	Needle miner	Ponderosa pine
SR	Needle miner	7	Needle miner	Ponderosa pine
SS	Needle miner	7	Needle miner	Ponderosa pine
ST	Needle miner	7	Needle miner	Ponderosa pine
SU	Needle miner	7	Needle miner	Ponderosa pine
SV	Needle miner	7	Needle miner	Ponderosa pine
SW	Needle miner	7	Needle miner	Ponderosa pine
SX	Needle miner	7	Needle miner	Ponderosa pine
SY	Needle miner	7	Needle miner	Ponderosa pine
SZ	Needle miner	7	Needle miner	Ponderosa pine
TA	Needle miner	7	Needle miner	Ponderosa pine
TB	Needle miner	7	Needle miner	Ponderosa pine
TC	Needle miner	7	Needle miner	Ponderosa pine
TD	Needle miner	7	Needle miner	Ponderosa pine
TE	Needle miner	7	Needle miner	Ponderosa pine
TF	Needle miner	7	Needle miner	Ponderosa pine
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TF	Needle miner	7	Needle miner	Ponderosa pine
TF	Needle miner	7		

USGS 100K Quad: Snoqualmie Pass - A147121; 4D  
2007 Aerial Insect and Disease Detection Survey  
Mapscale: 1:100,000  
Date: November 27, 2007

## Legend

## Defoliating Agents

### 2007 Large Fires

Source: Northwest Coordination Center

 **Areas Not Flown**

### Importance, Agency

**Other Damage**

**WaDNR Managed Lands**

Source: Washington Dept. of Natural Resources

al copies  
s insect and  
able at:  
/data.shtml

A data dictionary, digital copies of this map and Arcgis insect and disease data are available at:  
[www.fs.fed.us/r6/nr/fid/data.shtml](http://www.fs.fed.us/r6/nr/fid/data.shtml)

## How the Aerial Surveys Are Conducted

Data represented on this map are based on trees visibly affected by forest insects and diseases detected and recorded during aerial survey flights conducted by the USDA Forest Service and the Washington Department of Natural Resources. Observers have just a few seconds to recognize the color difference between healthy and damaged trees of different species; diagnose causal agents correctly; estimate intensity; delineate the extent of damage; and precisely record this information on a georeferenced, digital map. Air turbulence, cloud shadows, distance from aircraft, haze, smoke and observer experience can all affect the quality of the survey. These data summaries provide an estimate of conditions on the ground and may differ from estimates derived by other methods.

The aerial survey provides information on the current status for many causal agents, and is important when examining insect activity trends by comparing historical and current survey data over large areas.

Overview surveys are a 'snap shot' in time and therefore may not be timed to accurately capture the true extent or severity of a particular disturbance activity. Specially designed surveys with modified flight patterns and timing may be conducted to more accurately delineate the extent and severity of a particular disturbance agent. Special surveys, such as Swiss needle cast surveys, are conducted when resources are available to address situations of sufficient economic, political or environmental importance.

DIRECT ALL INQUIRIES TO:

Washington State Department of  
Natural Resources  
Resource Protection  
Forest Health  
1111 Washington St. SE  
Olympia, WA 98504

-- OR --

USDA Forest Service, Region 6  
Natural Resources  
Forest Health Protection  
PO Box 3623  
Portland, Oregon 97208



WASHINGTON STATE DEPARTMENT OF  
**Natural Resources**  
Dean Sutherland, Commissioner of Public Lands



\*\*\*\*\*DISCLAIMER\*\*\*\*\*

The insect and disease data presented should only be used as an indicator of insect and disease activity, and should be ground-checked for precise location, extent, severity and causal agent.

Color coded polygons show locations where trees were recently killed or defoliated. Intensity of damage is variable and not all trees within coded polygons are dead or defoliated.

The cooperators reserve the right to correct, update, modify or replace GIS products without notice. Using this map for purposes other than those for which it was intended may yield inaccurate or misleading results.